REMARKS

The Office Action indicates that it responds to "communication(s) filed on 15 December 2003." Office Action at 1. December 15, 2003, constitutes the filing date of the application. The Applicant points out that, since that date, it has filed at least a Preliminary Amendment, a Submission of Formal Drawings (with six sheets of drawings), and an Information Disclosure Statement. Of those papers, the formal drawings appear to have been entered. *See* Office Action at 1 ("The drawing(s) filed on 10 December 2004 is/are accepted . . . by the Examiner."). The Applicant respectfully requests entry and consideration of the remaining submitted papers (if not already done).

Claims 1-50 are pending in the application. The Office Action objected to claim 40 and recommended changing the word "passive" to the word "active" in that claim. The Applicant thanks the Examiner for that recommendation. In response, the Applicant amends claim 40 with this paper to make the recommended change.

The Office Action rejected all of the pending claims. More specifically, the Office Action rejected claims 1-13, 19-25, and 31-50 as unpatentable under 35 U.S.C. § 102 as anticipated by U.S. Patent No. 6,028,445 to Lawman ("Lawman"). The Office Action further rejected claims 14-18 and 26-30 as unpatentable under 35 U.S.C. § 103 over Lawman and U.S. Patent No. 6,748,456 ("Stanton"). At least for the reasons elaborated below, the Applicant respectfully submits that the Office Action does not set forth proper *prima facie* rejections and, therefore, the claims are allowable over the cited art.

Claims 1, 9, 21, 33, and 41 are independent claims. Independent claim 1 includes, among other limitations, "the configuration circuitry further adapted to program a function of the programmable logic device (PLD) without using an input buffer to store the configuration data." Claims 2-8 depend, either directly or indirectly, on claim 1 and therefore include that limitation. The Office Action asserts that "Lawman discloses . . . without using an input buffer to store the configuration data (see 920 or 120 in Fig. 1)."

The Applicant respectfully disagrees, and respectfully submits that Lawman fails to teach or suggest "the configuration circuitry further adapted to program a function of the programmable logic device (PLD) without using an input buffer to store the configuration data," as claim 1 recites. To the Applicant's reading and understanding, Lawman does not discuss buffers. In fact, the Applicant cannot even find the word "buffer" in Lawman. Furthermore, the Applicant fails to appreciate the significance of the reference to "920 or 120 in Fig. 1" of Lawman. Item 920 does not appear to exist in Lawman's Fig. 1.

Furthermore, item 120 constitutes a "dedicated configuration port" used to configure IOBs and CLBs. Lawman at col. 1, lines 49-51 ("Each IOB and CLB can be configured through dedicated configuration port 120 to perform a variety of functions.") The Office Action fails to establish how dedicated configuration port 120 relates to the limitation at issue in claim 1. Accordingly, the Applicant respectfully submits that the Office Action does not set forth a *prima facie* anticipation rejection of independent claim 1 and, hence, dependent claims 2-8.

Independent claim 9 includes, among other limitations, "wherein the function of the programmable logic device (PLD) is programmed without stalling the configuration device." Claims 10-20 depend, either directly or indirectly, on claim 9 and therefore include that limitation. The Office Action fails to address that or other limitations specifically. Rather, it includes a general statement that "[c]laims 9-13, 18-25, 31-34, 37-50 are essentially the same in scope as apparatus claims 1-8 and 35-36, and are rejected similarly." Office Action at 3. Claim 3 includes a limitation "wherein the function of the programmable logic device (PLD) is programmed without stalling the configuration device." The Office Action rejects that claim, relying on a portion of Lawman. *See* Office Action at 3 ("Regarding claim 3, Lawman discloses, at lease in Fig. 9, that the function of the programmable logic device (PLD) is programmed without stalling the configuration device (col. 8, lines 12+)."

The Applicant assumes that the Office Action aims to rely on the rejection of claim 3 in order to reject claim 9. If so, the Applicant respectfully disagrees, and submits that Lawman fails to teach or suggest the limitation at issue and therefore does not anticipate independent claim 9 and dependent claims 10-20. At the outset, the Applicant cannot determine to what specific portion of

Lawman "col. 8, lines 12+" refers. Starting with line 12 and going to the end of column 8, Lawman fails to teach "wherein the function of the programmable logic device (PLD) is programmed without stalling the configuration device, as claim 9 recites. To the Applicant's reading and understanding, Lawman does not discuss stalling of the configuration device. In fact, the Applicant cannot even find the words "stall" or "stalling" in Lawman.

Furthermore, independent claim 9 includes, among other limitations, "a data converter circuit, the data converter circuit adapted to convert the serial configuration data into parallel configuration data to program a function of the programmable logic device (PLD)." The Office Action fails to address that or other limitations specifically. As noted, it includes a general statement that "[c]laims 9-13, 18-25, 31-34, 37-50 are essentially the same in scope as apparatus claims 1-8 and 35-36, and are rejected similarly." Office Action at 3. Claim 8 includes a limitation "wherein the configuration circuitry further comprises a data format converter circuit, the data format converter circuit adapted to convert the decompressed configuration data into parallel configuration data." Referring to a portion of Lawman, the Office Action rejects claim 8, and states "Lawman discloses, at least in Fig. 9, that the configuration circuitry further comprises a data format converter circuit, the data format converter circuit adapted to convert the decompressed configuration data into parallel configuration data (the parallel configuration data configures configuration port to accept parallel data from high speed device 1060; see col. 9, lines 10-18)." Office Action at 3.

The Applicant assumes that the Office Action aims to rely on the rejection of claim 8 in order to reject claim 9. If so, the Applicant respectfully disagrees, and submits that Lawman fails to teach or suggest the limitation at issue and therefore does not anticipate independent claim 9 and dependent claims 10-20. To the Applicant's reading and understanding, the cited portion of Lawman does not teach "a data converter circuit, the data converter circuit adapted to convert the serial configuration data into parallel configuration data to program a function of the programmable logic device (PLD)." The cited passage in part appears to discuss re-using parts of the FPGA after performing certain configuration tasks, rather than the claim limitation at issue. *See* Lawman at col. 9, lines 10-15 ("Once the other portions of FPGA 910 are configured, the portions of FPGA 910 used for decompression unit 940 and configuration port 1050 can be reconfigured to perform

additional logic functions by either high-speed device 1060 or configuration device 930, as described above.").

Furthermore, the rest of the cited passage in Lawman discusses "transferring compressed configuration data at high speed and in parallel through configuration port 1050." Lawman at col. 9, lines 15-18 ("The embodiment of FIG. 10 reduces the configuration time of FPGA 910 over the embodiment of FIG. 9 by transferring compressed configuration data at high speed and in parallel through configuration port 1050."). Thus, Lawman discusses using parallel configuration data; it does not teach "a data converter circuit, the data converter circuit adapted to convert the serial configuration data into parallel configuration data to program a function of the programmable logic device (PLD)," as claim 9 recites. Thus, the Applicant respectfully submits that Lawman fails to anticipate independent claim 9 and dependent claims 10-20 at least for this additional reason.

Independent claim 21 includes, among other limitations, "wherein the programmable logic device (PLD) is programmed without using a buffer to store the serial configuration data before processing of the configuration data by the data converter circuit." Claims 22-32 depend, either directly or indirectly, on claim 21 and therefore include that limitation. The Office Action does not specifically address that limitation or claim 21. As noted above, it merely makes a general statement that "[c]laims 9-13, 18-25, 31-34, 37-50 are essentially the same in scope as apparatus claims 1-8 and 35-36, and are rejected similarly." Office Action at 3. For reasons similar to those discussed above with respect to claim 1, the Applicant respectfully submits that Lawman fails to teach or suggest at least one limitation in claim 21. Thus, Lawman fails to anticipate claim 21 and dependent claims 22-32.

Independent claim 33 includes, among other limitations, "means for converting the decompressed data into parallel configuration data." Claims 34-40 depend, either directly or indirectly, on claim 33 and therefore include that limitation. The Office Action fails to address that or other limitations specifically. Rather, it includes a general statement that "[c]laims 9-13, 18-25, 31-34, 37-50 are essentially the same in scope as apparatus claims 1-8 and 35-36, and are rejected similarly." Office Action at 3. Claim 8 includes a limitation "wherein the configuration circuitry further comprises a data format converter circuit, the data format converter circuit adapted to convert

the decompressed configuration data into parallel configuration data." Referring to a portion of Lawman, the Office Action rejects claim 8, and states "Lawman discloses, at least in Fig. 9, that the configuration circuitry further comprises a data format converter circuit, the data format converter circuit adapted to convert the decompressed configuration data into parallel configuration data (the parallel configuration data configures configuration port to accept parallel data from high speed device 1060; see col. 9, lines 10-18)." Office Action at 3.

Based on those comments, the Applicant assumes that the Office Action aims to rely on the rejection of claim 8 in order to reject claim 33. If so, the Applicant respectfully disagrees, and submits that Lawman fails to teach or suggest the limitation at issue and therefore does not anticipate independent claim 33 and dependent claims 34-40. To the Applicant's reading and understanding, the cited portion of Lawman does not teach "means for converting the decompressed data into parallel configuration data." As noted above, the cited passage in part appears to discuss re-using parts of the FPGA after performing certain configuration tasks, rather than the claim limitation at issue. *See* Lawman at col. 9, lines 10-15 ("Once the other portions of FPGA 910 are configured, the portions of FPGA 910 used for decompression unit 940 and configuration port 1050 can be reconfigured to perform additional logic functions by either high-speed device 1060 or configuration device 930, as described above.").

In addition, as articulated above, the rest of the cited passage in Lawman discusses "transferring compressed configuration data at high speed and in parallel through configuration port 1050." Lawman at col. 9, lines 15-18 ("The embodiment of FIG. 10 reduces the configuration time of FPGA 910 over the embodiment of FIG. 9 by transferring compressed configuration data at high speed and in parallel through configuration port 1050."). Thus, Lawman discusses using parallel configuration data; it does not teach "means for converting the decompressed data into parallel configuration data," as claim 33 recites. Accordingly, the Applicant respectfully submits that Lawman fails to anticipate independent claim 33 and dependent claims 34-40 at least for that reason.

Independent claim 41 includes, among other limitations, "wherein the programmable logic device (PLD) is configured without buffering the serial configuration data." Claims 42-50 depend, either directly or indirectly, on claim 41 and therefore include that limitation. The Office Action

does not specifically address that limitation or claim 41. Rather, as noted above, it merely makes a general statement that "[c]laims 9-13, 18-25, 31-34, 37-50 are essentially the same in scope as apparatus claims 1-8 and 35-36, and are rejected similarly." Office Action at 3. For reasons similar to those discussed above with respect to claim 1, the Applicant respectfully submits that Lawman fails to teach or suggest at least one limitation in claim 41. Thus, Lawman fails to anticipate claim 41 and dependent claims 42-50.

As noted above, the Office Action rejected claims 14-18 and 26-30 as unpatentable over the combination of Lawman and Stanton. Claims 14-18 depend ultimately on claim 9, and claims 26-30 depend ultimately on claim 21. As discussed above in detail, Lawton fails to teach or suggest at least one limitation of independent claims 9 and 21 and, hence, the respective claims that depend on them. Thus, the Applicant respectfully submits that the Office Action may not properly rely on Lawton as part of an obviousness rejection of claims 14-18 and 26-30.

Furthermore, the Office Action fails to set forth a proper motivation for a person of ordinary skill in the art to combine Lawton and Stanton. A motivation or suggestion to combine references is an "essential requirement" of a *prima facie* obviousness case. *C.R. Bard, Inc. v. M3 Sys., Inc.*, 48 U.S.P.Q.2d (BNA) 1225, 1232 (Fed. Cir. 1998). The Office can satisfy its burden of showing obviousness "only by showing some *objective teaching*" leading to combination of references. *In re Fritch,* 23 U.S.P.Q.2d (BNA) 1780, 1783 (Fed. Cir. 1992) (emphasis added). Furthermore, the showing of a motivation or suggestion to combine references "must be clear and particular." *In re Dembiczak*, 50 U.S.P.Q.2d (BNA) 1614, 1617 (Fed. Cir. 1999).

Even assuming for the sake of the argument that the combination of Lawman and Stanton properly teaches the claimed invention, the Office Action fails to provide any proper, objective "evidence of ... a suggestion, teaching, or motivation" and, hence, does not meet those requirements. *Dembiczak*, 50 U.S.P.Q.2d (BNA) at 1617. The Office Action merely makes the bare assertion that "[i]t would have been obvious at the time the invention was made to a person having ordinary skill in the art to have provided the PLD of Lawman with the configuration controller as taught by Stanton in order to provide the flexible configuration capabilities and use data compression." Office Action at 4. The Office Action appears to rely on hindsight, and fails to set

forth any objective evidence of record why, at the time of the invention, someone of ordinary skill in the art would have been motivated to combine Lawman and Stanton. Accordingly, the Applicant respectfully submits that the Office Action does not set forth a *prima facie* obviousness case under 35 U.S.C. § 103.

Because of at least the reasons articulated above, the Applicant respectfully submits that the presently pending claims are allowable. The Applicant therefore respectfully requests a prompt Notice of Allowance.

CONCLUSION

The Applicant submits that the claims as amended are in condition for allowance, and requests reconsideration of the application and a prompt Notice of Allowability. With the exception of the petition for an extension of time, the Applicant believes that no additional fees are due in connection with this paper. Should any fees under 37 CFR § 1.16-.21 be required for any reason relating to the enclosed materials, however, the Commissioner is authorized to deduct such fees from Deposit Account No. 10-1205/ALTR:024.

The examiner is invited to contact the undersigned at the phone number indicated below with any questions or comments, or to otherwise facilitate expeditious and compact prosecution of the application.

Respectfully submitted,

MAXIMILIAN R. PETERSON
Registration No. 46,469
Attorney for Applicant

O'KEEFE, EGAN & PETERMAN
1101 Capital of Texas Highway South
Building C, Suite 200
Austin, Texas 78746
(512) 347-1611
FAX: (512) 347-1615